

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) An active matrix display device comprising:
 - a substrate having an insulating surface;
 - a plurality of pixel electrodes arranged in a matrix form over said substrate;
 - a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
 - a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and
 - a driver circuit comprising a plurality of second thin film transistors over said substrate for driving said plurality of switching elements,

wherein each of said plurality of second thin film transistors comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,

wherein channel forming regions of said first thin film transistor and said plurality of second thin film transistors have a same conductivity type.

wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and

wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

2. (Previously Presented) The active matrix display device according to claim 1 wherein said gate electrode is located over said semiconductor layer.

3. (Currently Amended) The active matrix display device according to claim 1 wherein all of said plurality of second thin film transistors are p-channel transistors.

4. (Currently Amended) The active matrix display device according to claim 1 wherein all of said plurality of second thin film transistors are n-channel transistors.

5. (Previously Presented) The active matrix display device according to claim 1 wherein said substrate is a glass substrate.

6. (Previously Presented) The active matrix display device according to claim 1 wherein said crystallized semiconductor layer comprises silicon.

7. (Currently Amended) An active matrix display device comprising:
a substrate having an insulating surface;
a plurality of pixel electrodes arranged in a matrix form over said substrate;
a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and
a driver circuit comprising a plurality of second thin film transistors over said substrate for driving said plurality of switching elements,
wherein each of said plurality of second thin film transistors comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,
wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and
wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

8. (Previously Presented) The active matrix display device according to claim 7 wherein said substrate is a glass substrate.

9. (Previously Presented) The active matrix display device according to claim 7 wherein said source and drain regions and said at least one lightly doped region are doped with phosphorus.

10. (Canceled)

11. (Previously Presented) The active matrix display device according to claim 7 wherein said gate electrode is located over said semiconductor layer.

12. (Original) The active matrix display device according to claim 7 wherein said gate electrode is located over said semiconductor layer.

13. (Currently Amended) An active matrix display device comprising:
a substrate having an insulating surface;
a plurality of pixel electrodes arranged in a matrix form over said substrate;
a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and
~~a CMOS circuit comprising at least one n-channel thin film transistor and one p-channel thin film transistor,~~
a gate driver circuit comprising a plurality of second thin film transistors over said substrate for driving said plurality of switching elements,
~~wherein each of said n-channel and p-channel thin film transistors said plurality of second thin film transistors~~ comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,
wherein channel forming regions of said first thin film transistor and said plurality of second thin film transistors have a same conductivity type,
wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and
wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

14. (Previously Presented) The active matrix display device according to claim 13 wherein said substrate is a glass substrate.

15. (Previously Presented) The active matrix display device according to claim 13 wherein said gate electrode is located over said semiconductor layer.

16. (Previously Presented) The active matrix display device according to claim 13 wherein said crystallized semiconductor layer comprises silicon.

17. (Currently Amended) An active matrix display device comprising:
a substrate having an insulating surface;
a plurality of pixel electrodes arranged in a matrix form over said substrate;
a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and
a CMOS circuit comprising at least one n-channel thin film transistor and one p-channel thin film transistor, over said substrate,
wherein each of said first n-channel and second p-channel thin film transistors comprising a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,
wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and
wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

18. (Previously Presented) The active matrix display device according to claim 17 wherein said substrate is a glass substrate.

19. (Currently Amended) An active matrix display device comprising:
a substrate having an insulating surface;
a plurality of pixel electrodes arranged in a matrix form over said substrate;
a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and
a driver circuit comprising a plurality of second thin film transistors over the substrate for driving said plurality of switching elements,

wherein each of ~~the film transistors of said switching elements~~ said first thin film transistor and ~~said driver circuit~~ said plurality of second thin film transistors comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,

wherein channel forming regions of said first thin film transistor and said plurality of second thin film transistors have a same conductivity type,

wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and

wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

20. (Previously Presented) The active matrix display device according to claim 19 wherein said gate electrode is located over said semiconductor layer.

21. (Currently Amended) The active matrix display device according to claim 19 wherein all of said plurality of second thin film transistors are p-channel transistors.

22. (Currently Amended) The active matrix display device according to claim 19 wherein all of said plurality of second thin film transistors are n-channel transistors.

23. (Previously Presented) The active matrix display device according to claim 19 wherein said substrate is a glass substrate.

24. (Previously Presented) The active matrix display device according to claim 19 wherein said crystallized semiconductor layer comprises silicon.

25. (Currently Amended) An active matrix display device comprising:

a substrate having an insulating surface;

a plurality of pixel electrodes arranged in a matrix form over said substrate;

a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;

a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and

a driver circuit comprising a plurality of second thin film transistors over said substrate for driving said plurality of switching elements,

wherein each of ~~the thin film transistors of the switching elements~~ said first thin film transistor and ~~the driver circuit~~ said plurality of second thin film transistors comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,

wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and

wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

26. (Previously Presented) The active matrix display device according to claim 25 wherein said substrate is a glass substrate.

27. (Previously Presented) The active matrix display device according to claim 25 wherein said source and drain regions and said at least one lightly doped region are doped with phosphorus.

28. (Canceled)

29. (Previously Presented) The active matrix display device according to claim 25 wherein said gate electrode is located over said semiconductor layer.

30. (Previously Presented) The active matrix display device according to claim 25 wherein said crystallized semiconductor layer comprises silicon.

31. (Currently Amended) An active matrix display device comprising:

a substrate having an insulating surface;

a plurality of pixel electrodes arranged in a matrix form over said substrate;

a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;

a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and

~~a CMOS circuit comprising at least one n-channel thin film transistor and one p-channel thin film transistor;~~

a gate driver circuit comprising a plurality of second thin film transistors over said substrate for driving said plurality of switching elements,

~~wherein each of the film transistors of the switching elements said first thin film transistor and said n-channel and p-channel thin film transistors said plurality of second thin film transistors~~ comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film,

wherein channel forming regions of said first thin film transistor and said plurality of second thin film transistors have a same conductivity type,

wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and

wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

32. (Previously Presented) The active matrix display device according to claim 31 wherein said substrate is a glass substrate.

33. (Previously Presented) The active matrix display device according to claim 31 wherein said gate electrode is located over said semiconductor layer.

34. (Previously Presented) The active matrix display device according to claim 31 wherein said crystallized semiconductor layer comprises silicon.

35. (Currently Amended) An active matrix display device comprising:
a substrate having an insulating surface;
a plurality of pixel electrodes arranged in a matrix form over said substrate;
a plurality of switching elements operationally connected to said pixel electrodes, each of said switching elements comprising a first thin film transistor over said substrate;
a display medium comprising an emissive material and capable of electrically changing luminous strength disposed at each of said pixel electrodes; and

a CMOS circuit comprising at least one n-channel thin film transistor and one p-channel thin film transistor, over said substrate,

wherein each of ~~the film transistors of the switching elements~~ said first thin film transistor and said n-channel and p-channel thin film transistors comprises a crystallized semiconductor layer, a gate insulating film adjacent to said crystallized semiconductor layer and a gate electrode adjacent to said gate insulating film, and

wherein said crystallized semiconductor layer has source and drain regions and at least one lightly doped region, and

wherein said lightly doped region is formed by an ion doping method, using said gate electrode as a mask.

36. (Previously Presented) The active matrix display device according to claim 35 wherein said substrate is a glass substrate.

37. (Previously Presented) The active matrix display device according to claim 35 wherein said crystallized semiconductor layer comprises silicon.

38. (Previously Presented) The active matrix display device according to claim 17 wherein said crystallized semiconductor layer comprises silicon.